Product Information

SARANEX 23E

Coextruded Barrier Film

SARANEX* 23E coextruded barrier film is a four-layer film of a low density polyethylene (LDPE)/tie/Saran* resin/ethylene acetate (EVA) structure. Available in customized slit widths.

Physical Properties		Test Method	Imperial Values	Metric Values
Thickness		ASTM D 374	2 mil	50 µm
Yield (Area Factor)		ASTM D 4321	13,360 in²/lb	19 m²/kg
Ultimate Tensile Strength	MD TD	ASTM D 882	2465 psi 1740 psi	17 N/mm² 12 N/mm²
Tensile Elongation at Break	MD TD	ASTM D 882	300% 350%	300% 350%
Heat Seal Strength, 2 Bar, 1.5 sec, 356°F (180°C)	MD TD	ASTM F 88	3.4 lb/in seal width 2.7 lb/in seal width	15 N/25.4 mm seal width 12 N/25.4 mm seal width
Oxygen Transmission Rate, 73°F (23°C)		ASTM D 3985	0.5 cm³/100 in²/day/atm	8 cm³/m²/day/atm
Water Vapor Transmission Rate, 100°F (38°C), 90% RH		ASTM E 398	0.2 g/100 in²/day	3.0 g/m²/day
Coefficient of Friction (kinetic), PE/PE		ASTM D 1894	0.20-0.40	0.20-0.40

(1) Values are typical laboratory averages. They are intended as guides only and are not sales specifications.

– *See "Handling Considerations" reverse side.*

Handling Considerations

Material Safety Data sheets for SARANEX Films are available from The Dow Chemical Company to help customers/users further understand the proper handling of the product. A current MSD Sheet should be requested from your Dow sales representative prior to working with the product.

Health & Safety

SARANEX Films products present no unusual health hazards when used in their intended manner. Observe usual industrial safe handling practices. Protect workers from possible contact with hot or molten film. Assure workers of a fresh air supply by appropriate exhaust and ventilation of work areas, especially where film is located. Avoid breathing dusts if such are generated.

During manufacture, handling or use, most film webs will develop and retain a static electrical charge. The magnitude of the charge and how long it will be stored are dependant upon the composition of the web, the kind of handling, and the atmospheric conditions, particularly humidity. SARANEX Films can discharge such stored electrical energy in the form of a spark, and therefore should not be handled in a flammable or explosive environment. Consult a current MSD sheet prior to working with the product.

Combustion Characteristics

SARANEX Films will burn under the right conditions of heat and oxygen supply. When burning, SARANEX Films may contribute high fuel value. Products of combustion include carbon compounds and oxides, water, and hydrogen chloride. Fumes of hydrogen chloride are corrosive and irritating; they are toxic under conditions of high concentration and/or prolonged human exposure.

Fires can be extinguished by conventional means, with water fog preferred. Firefighters should be protected from inhalation of hydrogen chloride and other products of combustion by use of self-contained breathing apparatus. Eye and skin exposure should be prevented by wearing a full-face mask and protective clothing.

Disposal

Scrap or waste of SARANEX Films can be disposed of by burial in an approved landfill or by burning in an approved *scrubber-equipped* incinerator.

When disposed of in a sanitary landfill, these films do not evolve gases or leachates known to pollute water resources. Because they do not provide a food source for bacteria, fungi, insects, or rodents, the films do not attract vermin or vectors in landfill disposal.

When burned in controlled industrial or municipal incinerators, these films will be consumed with very little resultant ash or smoke. The predominant products of combustion are carbon dioxide and water. If the incinerator is not designed to manage products having the high heat value of plastics, these films should be admixed (<10%) with low heat value waste so the combustion capacity of the incinerator is not exceeded. Effluent gasses should be scrubbed to avoid hydrogen chloride contamination of the air.

In any disposal of wastes, be certain all applicable federal, state, and local regulations are met.

ISO 9000 Certification

The Engineered Films and Laminates business has well defined and documented quality systems at each site. The business has an established quality network with a business quality leader and plant quality coordinators to support maintenance of the quality systems. The quality systems at each site have been third party certified to the ISO 9002 standard. We will be applying for certification to ISO 9001:2000 in the near future. Operation of disciplined quality systems is extremely important to us. This is how we assure we can produce and deliver quality products and services that our customers expect.

Packaging/Labeling/Traceability

Shipping container will be of sufficient strength and construction to ensure safe transportation to destination under normal shipping conditions.

Each roll and shipment will contain a lot number that is traceable through production records to input materials and process conditions. Material traceability will be according to current Good Manufacturing Practice (cGMP) guidelines in Dow North American facilities.

cGMP

The films produced by The Dow Chemical Company in North America are produced in facilities that follow the Good Manufacturing Practices Guide for Bulk Pharmaceutical Excipient. This guide has been created by an international consortium to address the needs of Excipients. This product may be produced and sold in Europe, which does not require the adherence to the FDA Good Manufacturing Principles. Please contact the business product stewardship specialist if more details are needed.

Food Contact

This film complies with the specific requirements associated with direct and indirect food contact. These requirements are the U.S. Food and Drug Administration (FDA 21 CFR), European Economic Community (EEC90/128 including amendments) and the German Health Office (Bundesgesundheitsamt - BGVV). Please contact the business product stewardship specialist for details on which requirements are met.

Biocompatability

This product family has been tested according to the USP VI/ISO 10993 Biological testing protocol. The results of this testing indicate that this film family is acceptable for prolonged skin contact. Biological testing of the finished medical device or other product is the responsibility of the device manufacturer.

Product Stewardship

The Dow Chemical Company has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis of our product stewardship philosophy by which Dow assesses the health and environmental information on our products and then takes appropriate steps to protect employee and public health and the environment. The Dow product stewardship program rests with every individual involved with Dow products from initial concept and research to the manufacture, sale, distribution, and disposal of each product.

Customer Notice

Dow encourages its customers and potential users of Dow products to review their applications for such products from the standpoint of human health and environmental quality. Dow personnel will assist customers in dealing with ecological and product safety considerations. Your Dow sales representative can arrange the proper contacts. Dow product literature, including Material Safety Data Sheets, should be consulted prior to the use of Dow products. These may be obtained from your Dow sales representative.

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